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DOCKET NO.: 250964US0DIV/phh



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

Masahiro ITO, et al.

SERIAL NO: 10/808,274

GROUP:

FILED: March 25, 2004

EXAMINER:

FOR: PROCESS FOR PRODUCING A FLUORINE ATOM-CONTAINING
SULFONYL FLUORIDE COMPOUND

LETTER

Mail Stop DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith is a People's Republic of China Office Action for the Examiner's consideration. The reference(s) cited therein have been previously filed on March 25, 2004.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
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THE PATENT OFFICE OF THE STATE INTELLECTUAL PROPERTY OFFICE
OF THE PEOPLE'S REPUBLIC OF CHINA

Address: No 6 Xi Tucheng Lu, Jimeng Qiao Haidian District, Beijing Post code: 100088 P.O. BOX: Beijing 8020

Shanghai Patent & Trademark Law Office

Date of Dispatch
March 5, 2004

Application No.: 01813464.5

Applicant: ASAHI GLASS COMPANY, LIMITED

Application Date: July 26, 2001

Agent:

Title: 含フッ素アシルフルオリドの製造方法および含フッ素ビニルエーテルの製造方法

THE FIRST OFFICE ACTION
(PCT APPLICATION IN THE NATIONAL PHASE)

1. ☒ According to the Request for Substantive Examination raised by the applicant and based on the provision of Item 1, Article 35 of the Patent Law, the Examiner has proceeded with the Examination as to Substance on the above mentioned application for patent for invention.
☐ According to Item 2, Article 35 of the Chinese Patent Law, the Patent Office has decided to examine the above application for patent for invention.
2. ☒ The applicant has requested that the filling date of
2000.07.28 at the JP Patent Office as the priority date,
_____ at the _____ Patent Office as the priority date,
_____ at the _____ Patent Office as the priority date,
3. ☐ The following amended documents submitted by the applicant cannot be accepted for not conforming to the provision of Article 33 of the Patent Law:
☐ The Chinese version of the attachment of the International Preliminary Examination Report.
☐ The Chinese version of the amended document submitted according to the provision of Rule 19 of the Patent Cooperation Treaty.
☐ The amended document submitted according to the provision of Rule 28 or Rule 41 of the Patent Cooperation Treaty.
☐ The amended document submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.
Refer to the text of the notice for the specific reason of non-acceptance thereof.
4. ☒ The examination is conducted by directing at the Chinese version of the original International Application submitted.
☐ The examination is conducted by directing at the following application documents:
☐ Description,
p. _____, the Chinese version of the original International Application Document submitted;
p. _____, the Chinese version of the attachment of the International Preliminary Examination Report;
p. _____, the amended document submitted according to the provision of Rule 28 or Rule 41 of the Patent Cooperation Treaty.

p. _____, the amended document submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.

☐ Claims,

_____, the Chinese version of the original International Application Document submitted.

_____, the Chinese version of the amended document submitted according to the provision of Rule 19 of the Patent Cooperation Treaty.

_____, the Chinese version of the attachment of the International Preliminary Report.

_____, the amended document submitted according to the provision of Rule 28 or Rule 41 of the Patent Cooperation Treaty.

_____, the amended document submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.

☐ Attached Drawings,

p. _____, the Chinese version of the original International Application Document submitted.

p. _____, the Chinese version of the attachment of the International Preliminary Examination Report.

p. _____, the amended document submitted according to the provision of Rule 28 or Rule 41 of the Patent Cooperation Treaty.

p. _____, the amended document submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.

5. ☒ This Notice cites the following Comparison Document(the number of which shall continue to be used in the subsequent examination proceedings):

No.	Number/Title of Document	Date of Publication (or the filing date of the conflicting Application)
1	US 3900372A	1975.08.19
2	US 5093432A	1992.03.03
3		
4		

Filed
3-25-04

6. The conclusive opinion drawn from the examination:

☐ As regards the Specification:

☐ The contents of the application fall under the scope stipulated by Article 5 of the Patent Law for which no patent right should be granted.

☐ The specification does not conform with the provision of Item 3, Article 26 of the Patent Law.

☐ The drafting of the specification does not conform with the provision of Rule 18 of the Implementing Regulations.

☒ As regards the Claims:

☐ Claim _____ does not possess the novelty as stipulated in Item 2, Article 22 of the Patent Law.

☒ Claim 1-12 does not possess the inventiveness as stipulated in Item 3, Article 22 of the Patent Law.

☐ Claim _____ does not possess the practical applicability as stipulated in Item 4, Article 22 of the Patent Law.

☐ Claim _____ falls under the scope of Article 25 of the Patent Law where no patent right is to be granted.

☒ Claim 1.3.7 does not conform with the provision of Item 4, Article 26 of the Patent Law.

- ☒ Claim 13-14 does not conform with the provision of Item 1, Article 31 of the Patent Law.
- ☐ Claim _____ does not conform with the provision of Item 1, Rule 13 of the Implementing Regulations of the Patent Law.
- ☐ Claim _____ does not conform with the provision of Rule 18 of the Implementing Regulations of the Patent Law.
- ☒ Claim 14-7,10-12 does not conform with the provisions of Rules 20 to 23 of the Implementing Regulations of the Patent Law.

Refer to the text of this Notice for the specific analyses of the conclusive opinion.

7. Based on the above conclusive opinion, the Examiner deems that:

- ☐ The applicant shall amend the application documents in accordance with the requirements raised in the text of the Notice.
- ☒ The applicant shall discuss in his observations reasons why this application for patent can be granted a patent right, and amend the portions indicated in the text of the Notice which have been deemed as not conforming with the provisions, or no patent right shall be granted.
- ☐ There are no substantive contents in the application for patent that can be granted a patent right. If the applicant does not present reasons or the reasons presented are not sufficient, the application shall be rejected.

8. The applicant is asked to note the following items:

- (1) According to the provision of Article 37 of the Patent Law, the applicant shall submit his observations within four months from the receipt of this Notice. Where, without justified reasons, the applicant does not respond at the expiration of said date, the application shall be deemed to have been withdrawn.
- (2) The applicant shall amend his application according to Article 33 of the Patent Law. The amended documents shall be in duplicate, and the form, in conformity with the relevant provisions in the Examination Guide.
- (3) The applicant and/or his agent can not, without first making an appointment, go to the Patent Office to have an interview with the Examiner.
- (4) The observations and/or the amended documents shall be mailed or delivered to the Department of Receipt, the Patent Office of the State Intellectual Property Office. No documents shall possess legal effects if not mailed or delivered to the Department of Receipt.

9. The text of this Notice totals 2 page(s), and includes the following attachment(s):

- ☒ duplicate copy(ies) of cited comparison document(s), altogether 2 copy(ies) 15 pages.
- ☐

Examination Department: _____ Examiner(Seal): _____

PCT171

The text of the First Office Action

As disclosed in the description, the present application relates to a process for preparing a fluorinated acyl fluoride and a process for preparing a fluorinated vinyl ether from the acyl fluoride. On examination, the following remarks are provided:

1. Claims 13-14 are objected under Item 1, Article 31 of the Chinese Patent Law

Claim 13 defines a process for producing compounds having formula (10) from product (3) obtained by the process defined in claim 1, and claim 14 defines two specific compounds. These claims and the process of claim 1 do not belong to one general inventive concept, not having one and the same or corresponding special technical feature, unable to meet Item 1, Article 31 of the Chinese Patent Law. The applicant should delete claims 13 and 14, the deleted inventions can be filed as a divisional application.

2. Claims 1-12 are rejected under Item 3, Article 22 of the Chinese Patent Law as lacking an inventive step

2.1 Claim 1 defines a process for producing fluorinated acyl fluoride. However, reference 1, US 3,900,372, has disclosed a process for producing fluorinated acyl fluoride (columns 1-5 thereof) comprising the steps of reacting a primary alcohol with perfluorinated acyl fluoride to form a partially fluorinated ester; fluorinating same by ECF to transfer the partially fluorinated ester into perfluorinated one; and dissociating the product obtained to form a perfluorinated acyl fluoride. The differences between the technical solution defined in claim 1 and that disclosed in reference 1 are that there are ether linkages, $-OR^A$ and $-OR^B$, in the partially fluorinated ester of claim 1, and the fluorination method of claim 1 is a liquid phase fluorination process rather than ECF. Reference 2, US 5,093,432A, has disclosed a process for fluorinating hydrocarbons by liquid phase fluorination process (See columns 2-4 and 7-8 thereof), and has clearly disclosed, from col.7, line 16 to col. 8, line 14, that the liquid fluorination process is particularly suitable for fluorinating compounds having ether linkages, because the compounds having ether linkages are liable to be interfered by the by product, hydrogen fluoride, during the fluorination, resulting in the C-O linkage to be broken. This content provides a clear technical hint that the liquid fluorination process rather than ECF should be used if there are ether linkages in compound (1), which is a raw material to be fluorinated. Therefore, a skilled person can easily find the technical solution defined in claim 1 by combining references 1 and 2, and such combination does not bring about any unexpected result. Claim 1 thus neither has prominent substantial features nor represents any notable progress, unable to have an inventive step prescribed in Item 3.

Article 22 of the Chinese Patent Law.

In addition, all technical features defined in claims 2-4 have been disclosed in reference 1, these claims thus neither have prominent substantial features nor represent any notable progress, unable to have inventive steps prescribed in Item 3, Article 22 of the Chinese Patent Law.

2.2 The additional technical feature defined in claim 5 is the fluorine content of compound (1) being 30-70%. Although reference 1 does not clearly mention the fluorine content, the esterification in the process thereof forms the partially fluorinated ester by reacting a primary alcohol with perfluorinated acyl fluoride while the same process is used in producing the present compound having formula (1). That is, if R^A and R^B are saturated hydrocarbon groups, X^1 , X^2 and X^3 are hydrogen atoms, R^C and R^D are perfluorinated saturated hydrocarbon groups, and X^4 , X^5 and X^6 are fluorine atoms, the fluorine content in compound (1) should be more than 30% but less than 70%. In addition, defining the fluorine content in claim 5 fails bring about any unexpected results.

Claim 6 further defines the molecular weight of compound (1), such definition is conventional in the art, not bring about any unexpected results. Therefore, none of claims 5 and 6 can have prominent substantial features or represent notable progress, not having inventive steps prescribed in Item 3, Article 22 of the Chinese Patent Law.

2.3 Based on the same reasons, none of claims 7-12 can have prominent substantial features or represent notable progress, not having inventive steps prescribed in Item 3, Article 22 of the Chinese Patent Law.

3. Claims 1, 3 and 7 are objected under Item 4, Article 26 of the Chinese Patent Law

The definitions on groups in claims 1 and 7 are too wide. According to the working examples, R^A and R^B are saturated C_{1-10} hydrocarbon groups, or R^A and R^B can be bonded together to form a C_{2-6} alkylene optional substituted by C_{1-6} alkyl; X^1 , X^2 and X^3 are hydrogen atoms; R^C and R^D are perfluorinated saturated C_{1-10} hydrocarbon groups, or R^C and R^D can be bonded together to form a perfluorinated C_{2-6} alkylene optional substituted by perfluorinated C_{1-6} alkyl; and X^4 , X^5 and X^6 are fluorine atoms. The definitions in claim 1 are too wide to be supported by the description, unable to meet Item 4, Article 26 of the Chinese Patent Law. In addition, the "Y being a halogen atom" in claim 3 should be defined into "Y being a fluorine atom", this claim thus can not meet Item 4, Article 26 of the Chinese Patent Law, either.

4. Claims 1, 4-7 and 10-12 are objected under Item 1, Rule 20 of the Implementing Regulations of the Chinese Patent Law

4.1 The parentheses in claims 1, 7 and 12 result in the scopes of these claims unclear, unable to meet Item 1, Rule 20 of the Implementing Regulations of the Chinese Patent Law.

4.2 Claims 4-6 and 10-12 are multi-dependent claims, their referring to other multi-dependent claim results in the scopes thereof unclear, unable to meet Item 1, Rule 20 of the Implementing Regulations of the Chinese Patent Law.

Based on the above, the present application can not be allowed according to the present application documents. The applicant should provide reasons to manifest the inventiveness of this application while clearing away the deficiencies within four months stipulated. All the amendments should meet Article 33 of the Chinese Patent Law, not going beyond the scope originally disclosed in the claims and description.

When submitting the amended sheets, the applicant should provide a marked-up copy in which all the additions, deletions or substitutions are marked up by red pen, and a clean copy to substitute the original one. The applicant should ensure the contents thereof being consistent with each other.



中华人民共和国国家知识产权局

邮政编码: 200233

上海市桂平路 435 号
上海专利商标事务所
沙永生



申请号: 01813464.5

部门及通知书类型: 9-C

发文日期:

申请人:

旭硝子株式会社

发明名称:

含氟酰氟的制造方法和含氟乙烯醚的制造方法

第一次审查意见通知书

(进入国家阶段的 PCT 申请)

1. ☒ 依申请人提出的实审请求, 根据专利法第 35 条第 1 款的规定, 审查员对上述发明专利申请进行实质审查。
☐ 根据专利法第 35 条第 2 款的规定, 国家知识产权局决定自行对上述发明专利申请进行审查。

2. ☒ 申请人要求以其在:

JP 专利局的申请日 2000 年 7 月 28 日 为优先权日,
 专利局的申请日 为优先权日,
 专利局的申请日 为优先权日,

3. ☐ 申请人于 年 月 日提交的修改文件, 不符合专利法实施细则第 51 条的规定。

- ☐ 申请人提交的下列修改文件不符合专利法第 33 条的规定, 因而不能接受:

- ☐ 国际初步审查报告附件的中文译文。
☐ 依据专利合作条约第 19 条规定所提交的修改文件的中文译文。
☐ 依据专利合作条约第 28 条或 41 条规定所提交的修改文件。



修改不能被接受的具体理由见通知书正文部分。

4. ☒ 审查是针对原始提交的国际申请的中文译文进行的。

- ☐ 审查是针对下述申请文件进行的:

说明书 第 页, 按照原始提交的国际申请文件的中文译文;
 第 页, 按照国际初步审查报告附件的中文译文;
 第 页, 按照依据专利合作条约第 28 条或 41 条规定所提交的修改文件;
 第 页, 按照依据专利法实施细则第 51 条规定所提交的修改文件。
 权利要求 第 项, 按照原始提交的国际申请文件的中文译文;
 第 项, 按照依据专利合作条约第 19 条规定所提交的修改文件的中文译文。
 第 项, 按照国际初步审查报告附件的中文译文;
 第 项, 按照依据专利合作条约第 28 条或 41 条所提交的修改文件;
 第 项, 按照依据专利法实施细则第 51 条规定所提交的修改文件。
 附图 第 页, 按照原始提出的国际申请文件的中文译文;
 第 页, 按照国际初步审查报告附件的中文译文;
 第 页, 按照依据专利合作条约第 28 条或 41 条所提交的修改文件;
 第 页, 按照依据专利法实施细则第 51 条规定所提交的修改文件。





中华人民共和国国家知识产权局

5. ☒ 本通知书引用下述对比文献 (其编号在今后的审查过程中继续沿用):

编号	文件号或名称	公开日期 (或抵触申请的申请日)
1	US3900372A	1975.8.19
2	US5093432A	1992.3.3
3		
4		

6. 审查的结论性意见:

☐ 关于说明书:

☐ 申请的内容属于专利法第 5 条规定的不授予专利权的范围。

☐ 说明书不符合专利法第 26 条第 3 款的规定。

☐ 说明书的撰写不符合专利法实施细则第 18 条的规定。

☒ 关于权利要求书:

☐ 权利要求____不具备专利法第 22 条第 2 款规定的新颖性。

☒ 权利要求 1-12 不具备专利法第 22 条第 3 款规定的创造性。

☐ 权利要求____不具备专利法第 22 条第 4 款规定的实用性。

☒ 权利要求 1、3、7 不符合专利法第 26 条第 4 款的规定。

☒ 权利要求 13-14 不符合专利法第 31 条第 1 款的规定。

☐ 权利要求____不符合专利法实施细则第 2 条第 1 款关于发明的定义的规定。

☐ 权利要求____不符合专利法实施细则第 13 条第 1 款的规定。

☒ 权利要求 1、4-7、10-12 不符合专利法实施细则第 20 条至第 23 条的规定。

☐

上述结论性意见的具体分析见本通知书的正文部分。

7. 基于上述结论性意见, 审查员认为:

☐ 申请人应按照通知书正文部分提出的要求, 对申请文件进行修改。

☒ 申请人应在意见陈述书中论述其专利申请可以被授予专利权的理由, 并对通知书正文部分中指出的不符合规定之处进行修改, 否则将不能授予专利权。

☐ 专利申请中没有可以被授予专利权的实质性内容, 如果申请人没有陈述理由或者陈述理由不充分, 其申请将被驳回。

☐

8. 申请人应注意下述事项:

(1) 根据专利法第 37 条的规定, 申请人应在收到本通知书之日起的 2 个月内陈述意见, 如果申请人无正当理由逾期不答复, 其申请将被视为撤回。

(2) 申请人对其申请的修改应符合专利法第 33 条的规定, 修改文本应一式两份, 其格式应符合审查指南的有关规定。

(3) 申请人的意见陈述书和/或修改文本应邮寄或递交给中国专利局受理处, 凡未邮寄或递交给受理处的文件不具备法律效力。

(4) 未经预约, 申请人和/或代理人不得前来中国专利局与审查员举行会晤。

9. 本通知书正文部分共有 3 页, 并附有下列附件:

☒ 引用的对比文件的复印件共 2 份 15 页。

☐



第一次审查意见通知书正文

如说明书所述, 本申请涉及一种含氟酰氟的制造方法和含氟乙烯醚的制造方法。经审查, 现提出如下审查意见。

1. 权利要求 13-14 不符合专利法第三十一条第一款的规定。

权利要求 13 是从权利要求 1 制备方法的产物 (3) 进一步反应的制备式 (10) 化合物的方法, 权利要求 14 要求保护两个具体化合物, 它们与权利要求 1 的制备方法之间不属于一个总的发明构思, 不具有相同或相应的特定技术特征, 不符合专利法第三十一条第一款的规定。申请人应将权利要求 13-14 删去或将其分案。

2. 权利要求 1-12 不符合专利法第二十二条第三款关于创造性的规定。

(1) 权利要求 1 要求保护含氟酰氟的制备方法, 对比文件 1 (US3900372)

(参见说明书第 1-5 栏) 也公开了含氟酰氟的制备方法, 首先, 伯醇与全氟化酰氟进行酯化反应得到部分氟化的酯, 然后进行 ECF, 使部分氟化的酯转化为全氟化的酯, 最后进行裂解得到全氟化酰氟, 权利要求 1 的技术方案与对比文件 1 的不同之处就在于部分氟化的酯式 (1) 中含有醚键-OR^A、-OR^B, 采用的氟化方法不是用 ECF, 而是用液相氟化法, 对比文件 2 (US5093432A) (参见说明书第 2-4 栏以及第 7-8 栏) 公开了液相氟化法用于将碳氢化合物进行氟化, 其中第 7 栏第 16 行-第 8 栏第 14 行明确指出, 将液相氟化法尤其用于含有醚键化合物的氟化中, 因为含有醚键的化合物在氟化的过程中容易受到副产物氟化氢的影响, 发生 C-O 键的断裂, 这就存在着明确的技术启示, 当氟化的原料式 (1) 中含有醚键时, 采用液相氟化法, 而不用 ECF 法, 因此本领域普通技术人员在对比文件 1 的基础上, 结合对比文件 2 的技术启示, 很容易得到权利要求 1 的技术方案, 而且, 也不具有意想不到的效果, 因此权利要求 1 不具有突出的实质性特点和显著的进步, 不符合专利法第二十二条第三款关于创造性的规定。权利要求 2-4 的附加技术特征在对比文件 1 中都已经公开, 因此不具有突出的实质性特点和显著的进步, 不符合专利法第二十二条第三款关于

创造性的规定。

(2) 权利要求 5 的附加技术特征为式 (1) 的氟含量为 30%-70%，对比文件 1 中并没有明确的氟含量，但是在第一步酯化反应中，是由伯醇和全氟化酰氟反应而得到的部分氟化的酯，而在本申请的技术方案中也是采取同样的方法得到的式 (1) 化合物，即： R^A 、 R^B 为饱和烃， X^1 、 X^2 、 X^3 为氢， R^C 、 R^D 为全氟代饱和烃， X^4 、 X^5 、 X^6 为氟时，这时式 (1) 化合物中的氟含量就是大于 30% 小于 70% 的，权利要求 5 具体指出氟含量的范围并不具有意想不到的效果，在权利要求 6 中，对于化合物 (1) 的分子量进行限定，这种限定是本领域普通技术人员很容易得到的，也不具有意想不到的效果，因此权利要求 5-6 不具有突出的实质性特点和显著的进步，不符合专利法第二十二条第三款关于创造性的规定。

(3) 基于与上述相同的理由，权利要求 7-12 不具有突出的实质性特点和显著的进步，不符合专利法第二十二条第三款关于创造性的规定。

3. 权利要求 1、3、7 不符合专利法第二十六条第四款的规定。

权利要求 1、7 中对于基团的定义范围太宽，根据实施例， R^A 、 R^B 为碳原子数 1~10 的饱和烃，或者， R^A 、 R^B 连接成任选被碳原子数 1~6 的烷基取代的碳原子数为 2~6 的亚烷基， X^1 、 X^2 、 X^3 为氢， R^C 、 R^D 为碳原子数 1~10 的全氟代饱和烃，或者， R^C 、 R^D 连接成任选被碳原子数 1~6 的全氟代烷基取代的碳原子数为 2~6 的全氟代亚烷基， X^4 、 X^5 、 X^6 为氟，而权利要求 1 中的定义太宽，得不到说明书的实质支持，不符合专利法第二十六条第四款的规定。权利要求 3 中的 Y 为卤原子应限定为氟，因此也不符合专利法第二十六条第四款的规定。

4. 权利要求 1、4-7、10-12 不符合专利法实施细则第二十条第一款的规定。

(1) 权利要求 1、7、12 存在不必要的小括号，导致权利要求的保护范围不清楚，不符合专利法实施细则第二十条第一款的规定。

(2) 权利要求 4-6、10-12 属于多项从属权利要求引用了多项从属权利要求，导致权利要求的保护范围不清楚，不符合专利法实施细则第二十条第一款的规定。

申请号: 01813464.5

第一次审查意见通知书正文

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基于上述理由, 本专利申请目前的文本是不能被授权的, 申请人应在本审查意见通知书指定的四个月期限内提出其具有创造性的理由, 同时克服上述缺陷。申请人在提交修改文本时应满足专利法第三十三条的规定, 不得超出原权利要求书和说明书的记载范围。

申请人在提交修改文本时应当提交: 第一, 修改涉及的那一部分原文的复印件, 采用标记在该复印件上注出所作的增加、删除或替换; 第二, 重新打印的替换页, 用于替换相应的原文。申请人应当确保上述两部分在内容上的一致性。